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EXAMINER
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**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/899,622

Filing Date: July 03, 2001

Appellant(s): APOSTOLOPOULOS ET AL.

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John P. Wagner, Jr.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 16, 2007 appealing from the Office action mailed March 6, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

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**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,366,888	Kroon et al.	4/2002
2002/0040479	Ehrman et al.	4/2002
6,401,085	Gershman et al.	6/2002
6,308,222	Krueger et al.	10/2001

Wang et al. "Multiple Description Coding Using Pairwise Correlating Transforms" IEEE Transactions On Image Processing, Vol. 10, No. 3, March 2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 6, 9, 11, 13-15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon (U.S. 6,366,888) in view of Wang, et al. ("Multiple Description Coding

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Using Pairwise Correlating Transforms” from IEEE Transactions On Image Processing, Vol. 10, No. 3, March 2001) in further view of Ehrman (U.S. 2002/0040479).

As per claim 1, Kroon teaches a method for streaming media data to a client, said method comprising: encoding an item of content comprising media data to be streamed to said client into a first multiple description bitstream and into a second multiple description bitstream (Abstract; column 1, line 66 – column 2, line 30); and distributing concurrently said first and second multiple description bitstreams, such that said first and second multiple description bitstreams are sent to said client via a plurality of transmission paths at differing qualities, and wherein said client decodes a media stream of a quality greater than either of said first or second quality should both said first and said second multiple description bitstreams be received at said client (column 1, line 66 – column 2, line 30; column 9, lines 45-65). Kroon does not specifically teach that the multiple description bitstreams are decodable independent of one another; and that client decodes said item of content at a first quality should only said first multiple description bitstream be received at said client, wherein said client decodes said item of content at a second quality should only said second multiple description bitstream be received at said client. Wang teaches decoding at a first quality should only first MDC be received at said client, decoding at a second quality should only second MDC be received at said client, and decoding at a higher quality than the first and second qualities should both MDCs be received at the client (abstract, column 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the independently decodable bitstreams as taught by Wang, into the media streaming system of Kroon. The motivation for doing so lies in the fact that adding acceptably functional bitstreams into Kroon would allow for a more robust system, where

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usable media can be received despite a failure to receive the baseline layer. Kroon also suggests using multiple baseline layers (column 10, lines 3-6), which renders the combination obvious to one of ordinary skill in the art. Kroon-Wang does not specifically teach the distribution of bitstreams to a plurality of servers placed at intermediate nodes throughout a network. Ehrman teaches the distribution of bitstreams to a plurality of servers and then allowing a client to receive the bitstreams from the plurality of servers (figure 1; paragraphs 0018-0023). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the ability to divide the bitstreams and send them to separate servers such that a client may receive the bitstreams from a plurality of paths, as taught by Ehrman in the system of Kroon-Wang. The motivation for doing so lies in the fact that Kroon-Wang contemplates path diversity through receiving packets from differing paths, but does not specifically disclose the differing paths correspond to differing servers. By including the transmission of data by different servers to one client, as taught by Ehrman in the system of Kroon-Wang, transmission speed and system efficiency increases. All inventions are from the same field of endeavor, namely the streaming of multimedia through a network.

As per claim 2, Kroon-Wang-Ehrman further teaches that the encoding further comprises: encoding said item of media data into a first and second complementary multiple description bitstream wherein each of said first and second complementary multiple description bitstreams contains complementary information (Kroon: column 7, line 66 – column 8, line 6).

As per claim 4, Kroon-Wang-Ehrman further teaches that said encoding further comprises: encoding said item of media data into a first and a second complementary multiple description bitstream wherein each of said first and second complementary multiple description

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bitstreams does not include encoded media data that is included in the other of said first and second complementary multiple description bitstreams (Kroon: column 7, line 66 – column 8, line 6).

As per claim 5, Kroon-Wang-Ehrman further teaches that said item of media data is selected from the group consisting of audio-based data, speech-based data, image-based data, graphic-data, and web page-based data (Kroon: column 7, line 66 – column 8, line 6).

As per claim 6, Kroon-Wang-Ehrman further teaches that said distributing further comprises: distributing said first multiple description bitstream to a first server and distributing said second multiple description bitstream to a second server (Ehrman: 0018-0023).

As per claim 9, Kroon-Wang-Ehrman further teaches that said method does not require complete duplication of said media data in order to achieve path diversity (Kroon: column 7, line 66 – column 8, line 6).

As per claim 11, Kroon-Wang-Ehrman teaches a method for achieving reliability and efficiency and for reducing single points of failure in the streaming of media data to a client, said method comprising: encoding an item comprising media data to be streamed to said client into a first complementary multiple description bitstream and into a second complementary multiple description bitstream, each of said first and second complementary multiple description bitstreams containing complementary information not included in the other of said first and second complementary multiple description bitstreams, and wherein said first multiple description bitstream is designed so that said item of a first quality is decoded by said client with only said first multiple description bitstream received at said client, wherein said second multiple description bitstream is designed so that said item of a second quality is decoded by said client

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with only said second multiple description bistream received at said client, and wherein said item of a quality greater than said first or second quality is decoded by said client with both said first and said second multiple description bitstreams received at said client (Kroon: abstract; column 1, line 66 – column 2, line 30; column 9, lines 45-65; Wang: abstract, column 1); and distributing concurrently said first complementary multiple description bitstream and said second complementary multiple description bitstream to a plurality of servers placed at intermediate nodes throughout a network, such that said first and second multiple description bitstreams are dispatched to said via a plurality of transmission paths (Ehrman: 0018-0023).

Claims 13-15, and 18 are rejected on the same bases as claims 4-6, and 9 respectively, as claims 13-15, and 18 teach a method of implementing claims 4-6, and 9 respectively.

Claims 7, 8, 10, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon-Wang-Ehrman in view of Gershman (U.S. 6,401,085).

As per claim 7, Kroon-Wang-Ehrman teaches the method for streaming media data to a client as recited in claim 1, but does not specifically teach that the receiving client is a mobile client. Gershman teaches the limitation that the receiving client is a mobile client (column 3, lines 14-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to include this limitation, as taught by Gershman in the system of Kroon-Wang-Ehrman, as they are all from the same field of endeavor, namely the efficient reception of services over the Internet. The existence of Internet capability on mobile devices is well known in the art, and its specific inclusion into Kroon-Wang-Ehrman's invention allows for further diversity and efficiency.



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As per claim 8, Kroon-Wang-Ehrman-Gershman teaches the method for streaming media data to a client as recited in claim 7, wherein the step comprises: distributing said first and second multiple description bitstreams to servers placed along a wired/wireless gateway (Gershman: column 3, lines 14-28; where the existence of wireless communication constitutes the existence of a wireless gateway system).

As per claim 10, Kroon-Wang-Ehrman-Gershman teaches the method for streaming media data to a client as recited in claim 1, wherein said method is performed in a network system selected from the group consisting of: wired and wired networks; wired and wireless networks; wireless and wired networks; and wireless and wireless networks. The existence of a fully wired network, as taught by Kroon-Wang-Ehrman, and the capability of a fully wireless network as taught by Kroon-Wang-Ehrman-Gershman, or any combination thereof, allows for the capability for there to exist any combination of wired and wireless interfaces. The different combinations constitute design choices and the teaching thus obvious to one of ordinary skill in the art at the time of the invention.

Claims 16, 17 and 19 are rejected under Kroon-Wang-Ehrman-Gershman on the same bases as claims 7, 8 and 10 respectively, as claims 16, 17 and 19 teach a method of implementing claims 7, 8 and 10 respectively.

Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon-Wang-Ehrman in view of Krueger (U.S. 6,308,222).

As per claim 20, Kroon-Wang-Ehrman teaches a system for streaming media data to a client, said system comprising: a first server having first memory coupled thereto, said first

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memory having a first multiple description bitstream of encoded said media data stored thereon, said first server adapted to transmit said first multiple description bitstream to a client via a first path (Kroon: Abstract; column 1, line 66 – column 2, line 30; column 9, lines 45-65; Ehrman: 0018-0023); and a second server having second memory coupled thereto, said second memory having a second multiple description bitstream of encoded said media data stored thereon, wherein said first multiple description bitstream and said second multiple description bitstream are decodable independent of one another, and wherein said first and second multiple description have approximately a same bitrate (Kroon: Abstract; column 1, line 66 – column 2, line 30; column 9, lines 45-65; Wang: abstract, column 1; Ehrman: 0018-0023), said second server adapted to transmit said second multiple description bitstream to said client via said second path, said first and second servers concurrently transmitting said first and second multiple description bitstreams such that said first and second multiple description bitstreams are provided to said client via a plurality of transmission paths, wherein said client decodes an item of content at a first quality should only said first multiple description bitstream be received at said client, wherein said client decodes said item of content at a second quality should only said second multiple description bitstream be received at said client, and wherein said client decodes said item of content at a quality greater than either of said first or second quality should both said first and said second multiple description bitstreams be received at said client (Kroon: Abstract; column 1, line 66 – column 2, line 30; column 9, lines 45-65; Wang: abstract, column 1; Ehrman: 0018-0023). Kroon-Wang-Ehrman does not specifically teach that the second bitstream is transcoded to a reduced bit rate according to bandwidth requirements and capabilities. Krueger teaches the transmission of data from a server to a client, and transcoding

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the data based on a variety of client requirements, including available bandwidth for its path through the network (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the ability to transcode data in view of bandwidth capabilities, as taught by Krueger in the system of Kroon-Wang-Ehrman. The motivation for doing so lies in the fact that transcoding would allow for stream-quality commensurate with system capability, so as to optimize the user's experience. All inventions are from the same field of endeavor, namely the efficient streaming of data through a network.

As per claim 21, Kroon-Wang-Ehrman-Krueger further teaches that the system further comprises: a content server coupled to said first server and said second server, said content server adapted to provide said first multiple description bitstream of encoded said media data to said memory coupled to said first server, said content server further adapted to provide said second multiple description bitstream of encoded said media data to said memory coupled to said second server (Kroon: Abstract; column 1, line 66 – column 2, line 30; column 9, lines 45-65; Ehrman: 0018-0023).

Claim 22 is rejected under Kroon-Wang-Ehrman-Krueger on the same basis as claim 5, which is rejected under Kroon-Wang-Ehrman, because claim 22 is a system for implementing the method of claim 5. The Krueger reference is necessarily included in the rejection of claim 22, as its parent claim, claim 20, is rejected under Kroon-Wang-Ehrman-Krueger.

Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon-Wang-Ehrman-Krueger in view of Gershman.

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As per claim 23, Kroon-Wang-Ehrman-Krueger teaches the system for streaming media data to a client, but does not specifically teach that the client is a mobile client. Gershman teaches the limitation that the receiving client is a mobile client (column 3, lines 14-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to include this limitation, as taught by Gershman in the system of Kroon-Wang-Ehrman-Krueger, as they are all from the same field of endeavor, namely the efficient reception of services over the Internet. The existence of Internet capability on mobile devices is well known in the art, and its specific inclusion into Kroon-Ehrman's invention allows for further diversity and efficiency.

As per claim 24, Kroon-Wang-Ehrman-Krueger-Gershman further teaches the system for streaming media data to a client, wherein said first server is placed along a wired/wireless gateway of a network (Gershman: column 3, lines 14-28; where the existence of wireless communication constitutes the existence of a wireless gateway system).

As per claim 25, Kroon-Wang-Ehrman-Krueger-Gershman further teaches the system for streaming media data to a client, wherein said second server is placed along a wired/wireless gateway of a network (Gershman: column 3, lines 14-28).

As per claim 26, Kroon-Wang-Ehrman-Krueger-Gershman further teaches the method for streaming media data to a client, wherein said method is performed in a network system selected from the group consisting of: wired and wired networks; wired and wireless networks; wireless and wired networks; and wireless and wireless networks. The existence of a fully wired network, as taught by Kroon-Wang-Ehrman-Krueger, and the capability of a fully wireless network as taught by Kroon-Wang-Ehrman-Gershman, or any combination thereof, allows for the capability for there to exist any combination of wired and wireless interfaces. The different

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combinations constitute design choices and the teachings are thus obvious to one of ordinary skill in the art at the time of the invention.

## **(10) Response to Argument**

### **10.1 Motivation Exists to Combine Wang With Kroon**

Appellant asserts that there exists no motivation to combine Wang with Kroon.

Examiner respectfully disagrees.

Specifically, it is asserted that Kroon teaches away from the suggested combination with Wang, because Kroon teaches the distribution of the E-representations, but only the C-representation is independently decodable, and that for listening to a musical piece, the C-representation is required.

However, the characteristics of the Kroon invention do not teach away from the claimed invention. The motivation for the creation of the Kroon invention is to send the user audio that the user system can handle. For example, if a user system only has a 28.8 kbps modem capability, the system sends audio at a minimal quality because of its minimal size. If a user system has a faster connection, the system can send audio at a higher quality (by including an E-representation(s)). This eliminates the need for having different versions of an audio file, and instead, allows for the simple combination of representations to arrive at audio of a higher quality. This is beneficial for network/server workload, for example. As such, the motivation of the Kroon invention is so that users of all system types may enjoy the reception of media (lower

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quality/higher quality) without the system having to store unnecessary files. This leads to a lighter, faster, and more efficient system.

In view of these motivations, it would have been obvious to one of ordinary skill in the art at the time of the invention to envision further efficiency within the system. A known method to achieve this could include that a C-representation is not required to recover viable audio signals. This would achieve further efficiency in the system, by, for example, including different audio representations, such that receiving any one of them would result in a viable audio signal, and that combining the signals would result in a higher quality audio signal. This would eliminate the need for storing a dedicated C-representation, and that receiving any of the audio signals would result in the ability to independently decode them for listening by the user system. This would further lighten the system.

The abovementioned modification of the Kroon system would have been obvious at the time of Appellant's invention, in view of Kroon's own focus on efficiency, and especially because Wang **explicitly** teaches the concept of sending multiple bitstreams, such that they are independently decodable if separate, and decodable at a higher quality if combined (Abstract, column 1). To one of ordinary skill in the art, it would have been completely obvious to substitute this concept into system of Kroon, because Wang is from the same field of endeavor, because efficiency would be improved in Kroon by including the concept, because the concept was in use in the art of media streaming, and because Wang explicitly discloses the very same concept as claimed and the merits thereof.

As such, motivation certainly exists to combine Kroon and Wang, and Kroon does not teach away from (or prevent) the inclusion of Wang's teachings.

## **10.2 Motivation Exists to Include Ehrman into Kroon-Wang**

Ehrman was not relied upon to teach the independent decoding of bitstreams. Given the propriety of the Kroon-Wang combination, the Ehrman combination is also proper, as it is relied on to teach the distribution of bitstreams to a plurality of servers and then allowing a client to receive the bitstreams from the servers. This concept is eminently well known in the art of file distribution, and thus would have been obvious to one of ordinary skill in the art to include, to increase the efficiency of the system, for example.

Given that the Kroon-Wang system properly teaches independently decodable bitstreams, Appellant's assertion of "non-viable receipt of content (because of E-representations without C-representations)" is rendered moot. The inclusion of Ehrman into the Kroon-Wang system would result in parallel transmission/reception of independently decodable bitstreams, such that the common concept of path diversity is achieved.

## **10.3 Combining the Concepts of Wang with Kroon Would Not Render the System Unsatisfactory for its Intended Purpose**

The intended purpose of Kroon is to send media to users at different qualities corresponding to user system preferences/capabilities, where combined streams result in higher qualities. To include the well-known concept that the streams may be decoded independently does not render the system unsatisfactory. The intended purpose remains intact.

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As disclosed in the Final Office Action (March 6, 2007): “The Kroon invention is relied upon to teach the concepts of streaming media to a client through multiple description bitstreams, such that when multiple streams are received by the client, it is decoded at a quality higher than the bitstreams individually. Therefore, the combined stream is at a higher quality than the individual streams. As discussed above, Kroon does not teach that the streams are independently decodable and usable, if only one stream is received, for example. The Wang reference is then relied upon to disclose the teaching of having multiple streams, such that combined, they are decoded at a quality higher than the individual streams, and that the streams can be decoded independently, but at a lower quality. Therefore, the inclusion of the teachings of Wang into the cited teachings of Kroon would not render the Kroon system inoperable, but would rather improve it, such that the individual streams now have independent decodability and usability. In view of Kroon’s requirements for fast and reliable streaming, the inclusion of independent decoding functionality as taught by Wang would have been obvious to one of ordinary skill in the art at the time of the invention...”

#### 10.4 Application of KSR

In KSR, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” KSR, 127 S.Ct. at 1739, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious without an explicit application of the teaching, suggestion, motivation test. In particular, the Supreme Court emphasized that “the principles laid down in Graham reaffirmed the ‘functional approach’ of Hotchkiss, 11 How. 248.” KSR, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar



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**elements according to known methods is likely to be obvious when it does no more than yield predictable results.”** Id. The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” Id.

The Supreme Court stated that there are “[t]hree cases decided after *Graham* [that] illustrate this doctrine.” Id. at 1739, 82 USPQ2d at 1395. “In *United States v. Adams*, ... [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” Id. at 1739-40, 82 USPQ2d at 1395. “*Sakraida and Anderson’s-Black Rock* are illustrative – a court must ask whether the improvement is more than the predictable use of prior art elements according to their established function.” Id. at 1740, 82 USPQ2d at 1395.

The Supreme Court’s opinion in *United States v. Adams*, 383 U.S. 39, 40, 148 USPQ 479, 480 (1966) is illustrative of the “functional approach” to be taken in cases where the claimed invention is a prior art structure altered by substituting one element in the structure for another known element. KSR, 127 S.Ct. at 1734, 82 USPQ2d at 1391. **“The Court [in *Adams*] recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result. 383 U.S., at 50-51.”** Id. Ultimately the *Adams* Court found the combination at issue not obvious to those skilled in the art because, although the elements were known in the prior art, they worked together in an *unexpected* manner.

The [*Adams*] Court relied upon the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. Id., at 51-52, 86 S.Ct. 708. When *Adams* designed his battery, the prior art warned that risks were involved in using the types of electrodes he employed. *The fact that the*

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*elements worked together in an unexpected and fruitful manner supported the conclusion that Adams's design was not obvious to those skilled in the art.*

KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1395 (emphasis added).

The Supreme Court stated that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” Id. The Court explained, “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” Id. at 1740-41, 82 USPQ2d at 1396. The Court noted that “[t]o facilitate review, this analysis should be made explicit.” Id., citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” Id.

The Federal Circuit recently concluded that it would have been obvious to combine (1) a mechanical device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) an electronic, processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Ent., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161, 82 USPQ2d 1687, 1690-91 (Fed. Cir. 2007) (“[a]ccommodating a prior art mechanical device that accomplishes [a desired] goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children’s learning devices”). In reaching that conclusion, the Federal Circuit recognized that “[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not.” Id. at 1161, 82 USPQ2d at 1687 (citing *KSR*, 127 S.Ct. 1727, 1739, 82 USPQ2d 1385, 1395 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”)). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was “uniquely challenging or difficult for one of ordinary

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skill in the art” or “represented an unobvious step over the prior art.” Id. (citing KSR, 127 S.Ct. at 1740-41, 82 USPQ2d at 1396).

The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art. *Custom Accessories, Inc. v. Jeffrey- Allan Indus., Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986). In determining this skill level, the court may consider various factors including “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” Id. (cited in *In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995)). In a given case, every factor may not be present, and one or more factors may predominate. Id. at 962-63, 1 USPQ2d at 1201.” (emphasis added)

In view of KSR, the combination of Kroon and Wang is proper, because of the fact that the known concept of Wang was substituted into the system of Kroon. Given that the combination of the known concepts has resulted in a predictable result, the combination would have been properly obvious to one of ordinary skill in the art. Further:

“The claim is to a structure already known in the prior art that is altered by the mere substitution of one known element for another element known in the field for the same function. The facts themselves show that there is no difference between the claimed subject matter and the prior art but for the combination itself. “[T]he mere existence of differences between the prior art and an invention does not establish the invention's nonobviousness. The gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonably skilled in the art.” *Dann v. Johnston*, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976)

Also:

Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle. KSR, 127 S.Ct. at 1742, 82 USPQ2d at 1397.

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It would therefore be proper to combining Kroon and Wang given that a person of ordinary skill in the field of media distribution would have envisioned a combination of the concept of Wang into the system of Kroon, given its well known quality in the field. Through common sense, a system in which bitstreams may independently be decoded would have been contemplated by one of ordinary skill in the art, in view of Wang.

As discussed in the *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.*, rationales for determining obviousness include:

- A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

With respect to the current discussion, rationale A is fulfilled by combining the element of independent decoding with the Kroon system. Rationale B is fulfilled as a result of a simple

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substitution of independent decoding. Rationales C and D are fulfilled by Kroon's improvement by introducing Wang. Rationale E is also fulfilled, given the Wang concept would have been obvious to try in view of its common use in the art at the time of the invention. Rationales F and G are fulfilled given the incentive (and Kroon's desire) for system efficiency by introducing independent decoding.

### 10.5 The Remaining Claims

Appellant's argument solely focused on the propriety of the inclusion of Wang into Kroon (claims 1 and 11). Because this argument has respectfully been traversed above, the remaining claims stand rejected by the same rationale set forth in the Final Office Action, because no additional arguments were made with respect to the remaining claims.

### (11) Related Proceeding(s) Appendix


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Tanim M. Hossain

Conferees:



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